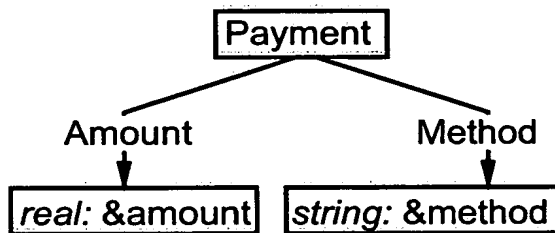
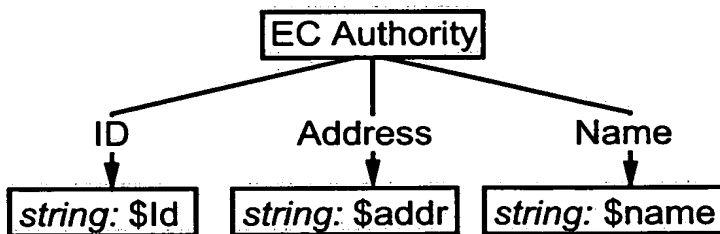


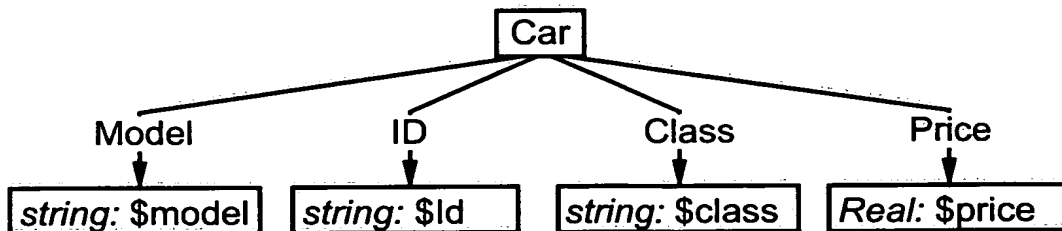
a) The Purchase Contract Class



b) The payment class

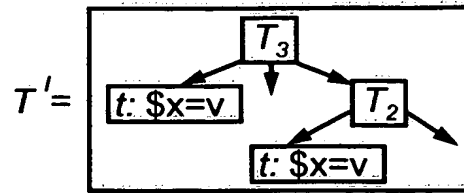
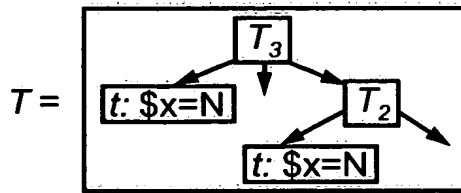


c) The EC Authority class

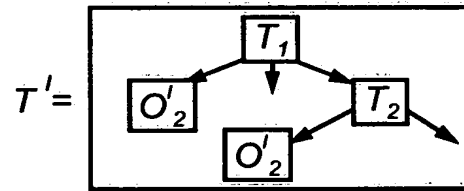
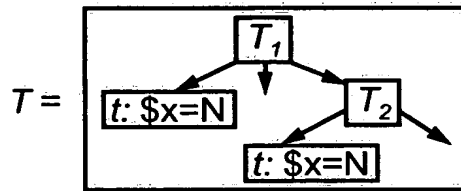


d) The Car Class

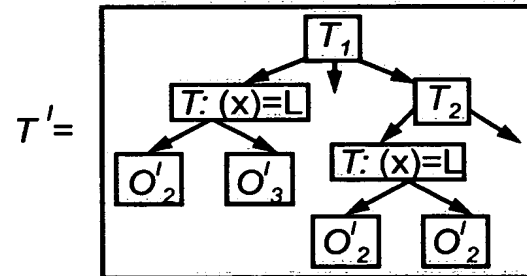
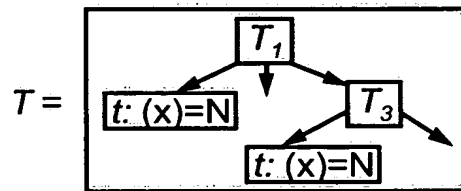
Fig. 1 Examples of classes



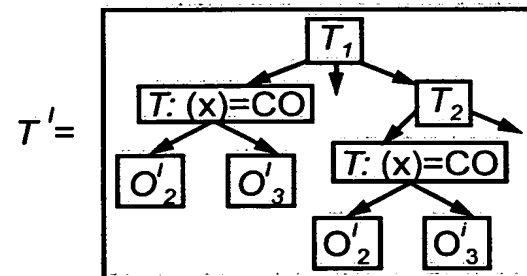
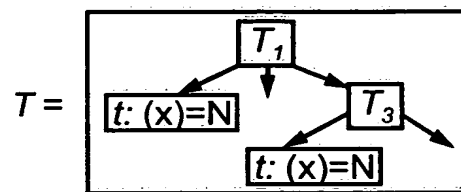
- (a) T' is tree resulting from the assignment of the atomic value v to atomic variable Sx in T



- (b) T' is tree resulting from the assignment of the instance O'_2 of type t' to the class variable Sx in T_1 . In T' the root of O'_2 is labeled with the variable $(t: Sx = t')$

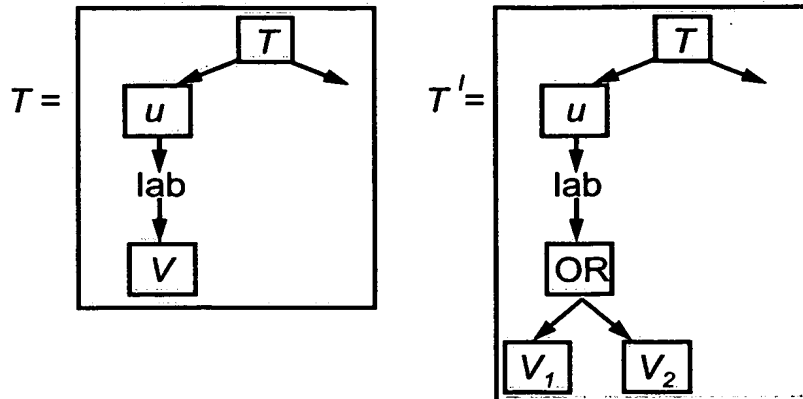


- (c) T' is tree resulting from the assignment of the list of instances (O'_2, O'_3) to the class list variable (x) in T .

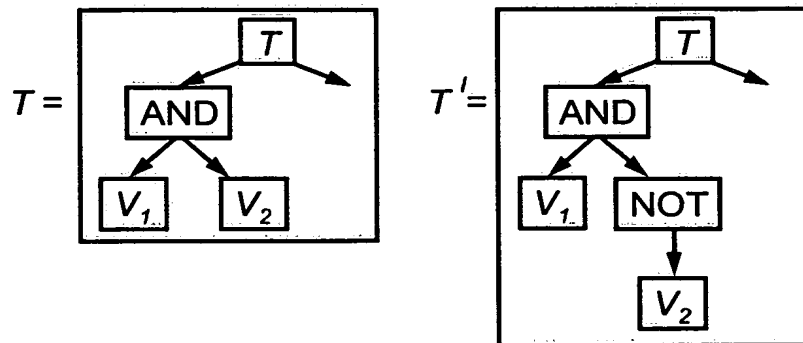


- (d) T' is tree resulting from the definition of the list containment constraint (x) (O'_2, O'_2) in T .

Fig. 2 Variable instantiations



- (a) T' is the result of adding an OR vertex to T - Note that V_1 and V_2 must be isomorphic to V up to renaming of variables. Adding an AND vertex is done in a similar way.



- (b) T' is the result of adding a NOT vertex to T - Note that NOT vertices can be added only subtrees rooted at an AND vertex

Fig. 3 Adding operator vertices

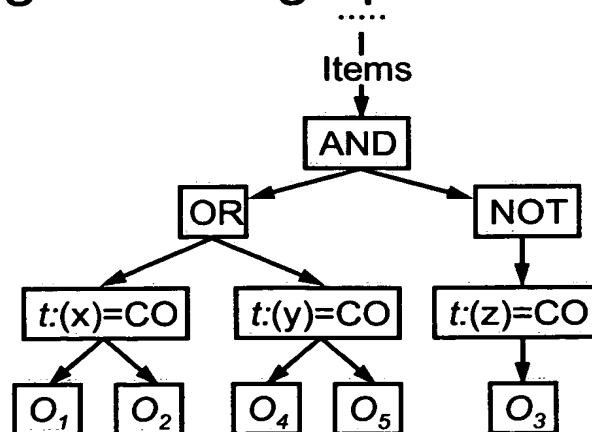


Fig. 4 Using operator vertices

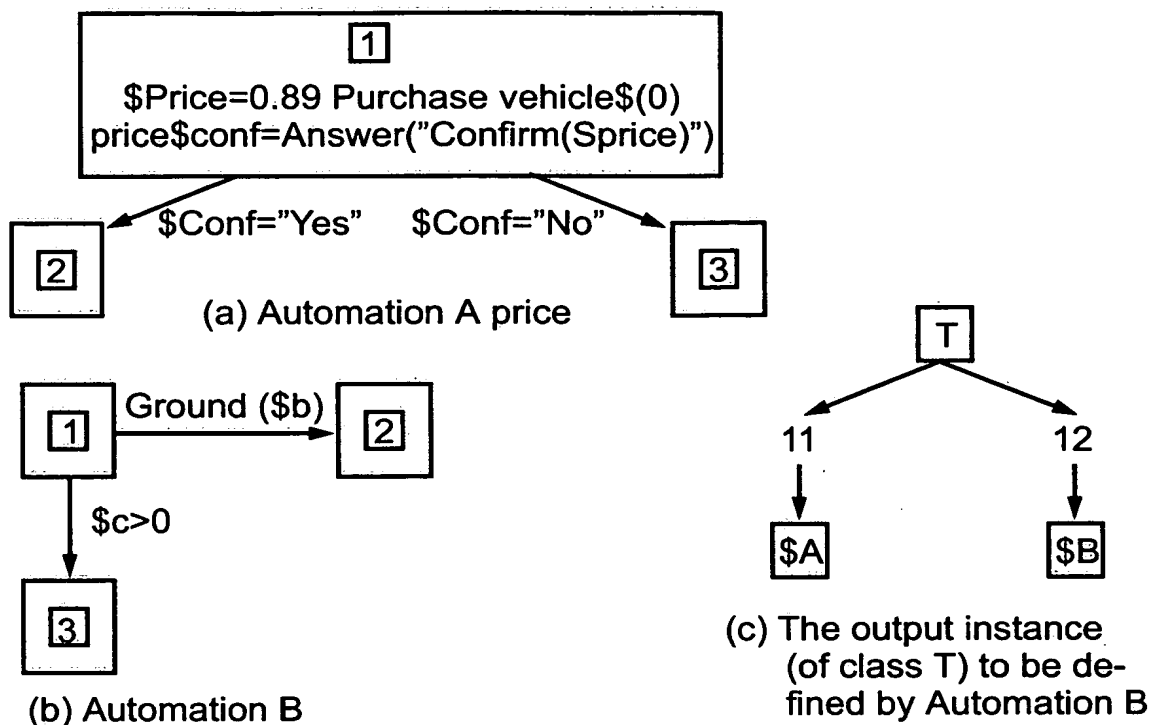


Fig. 5 ~~Commerce automata-The final states have double frames~~

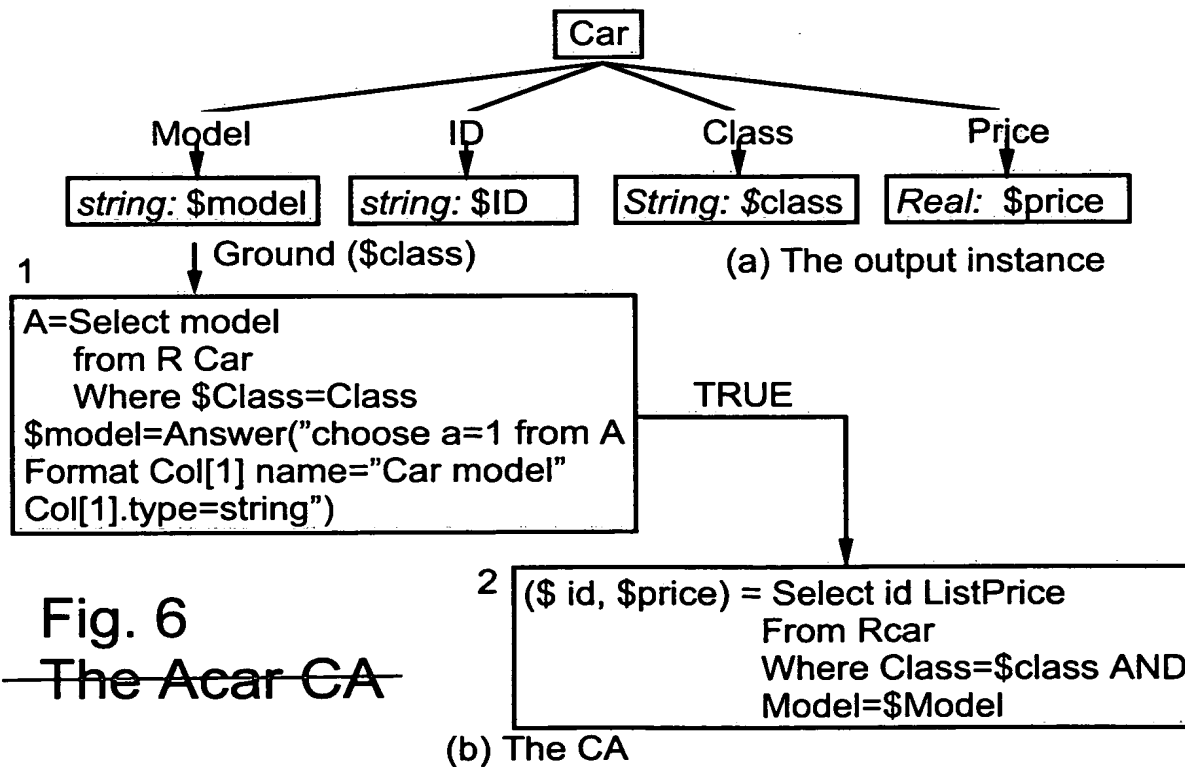


Fig. 6
~~The Acar CA~~

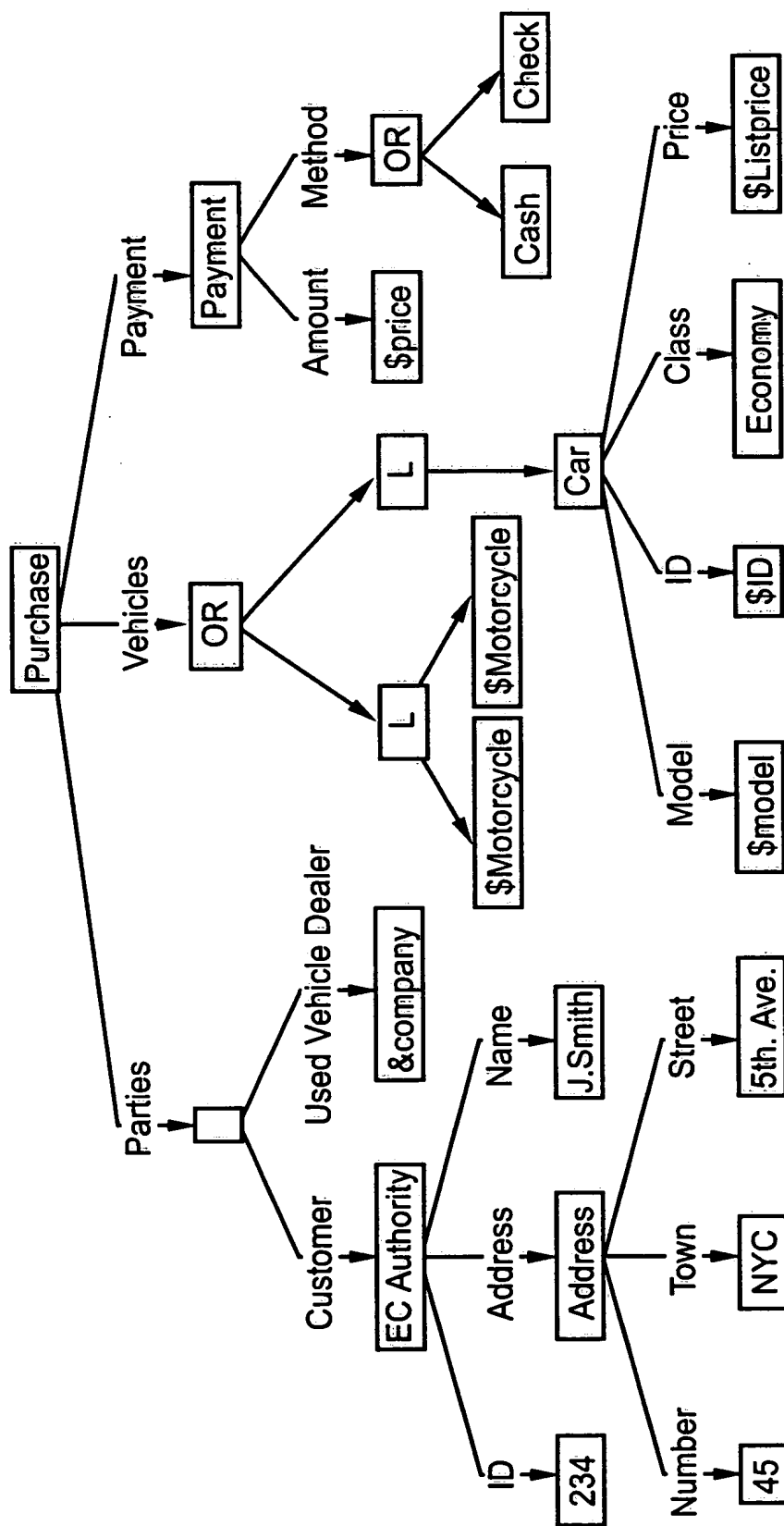


Fig. 7 The customer's intention tree

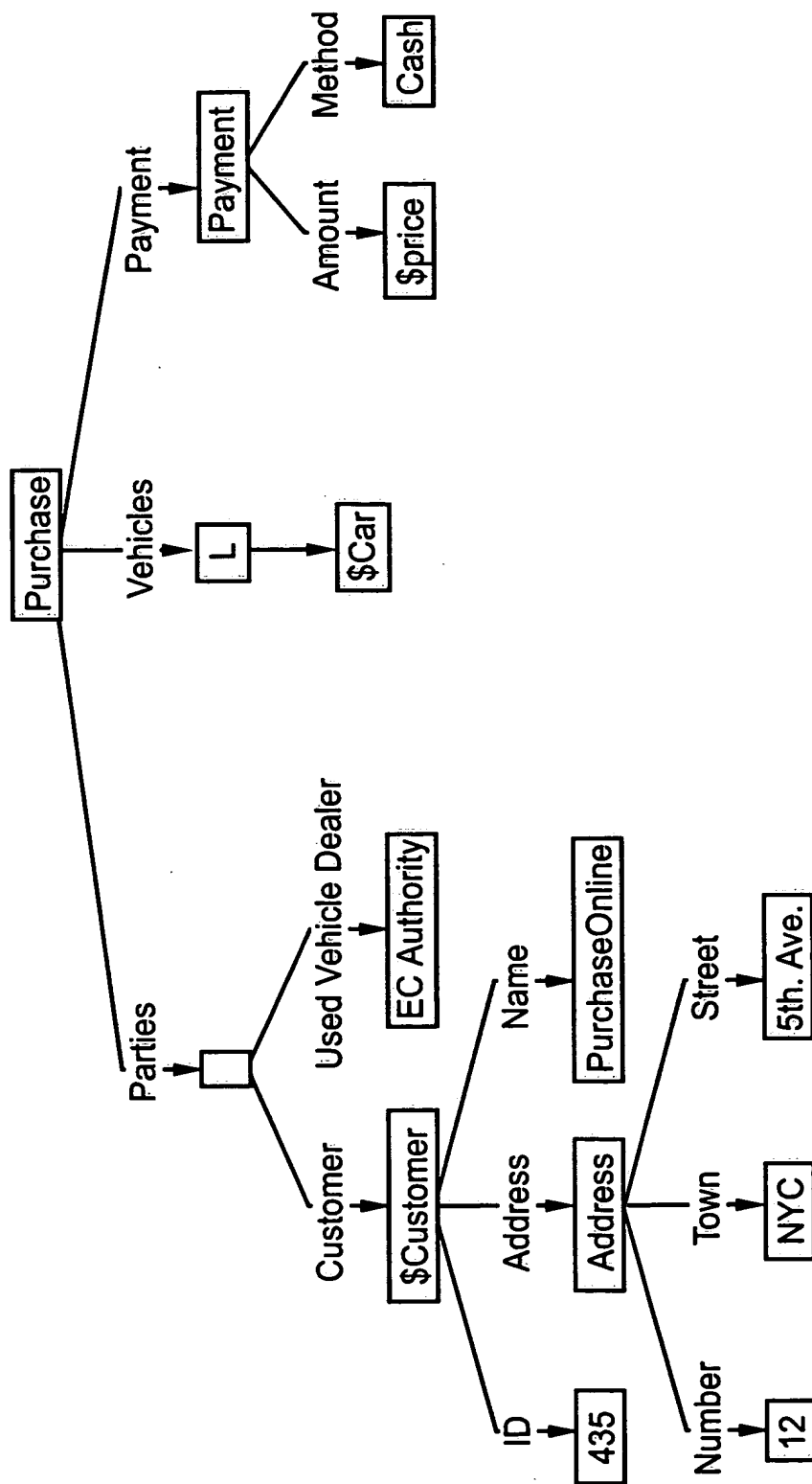


Fig. 8 The used car dealer's intention tree

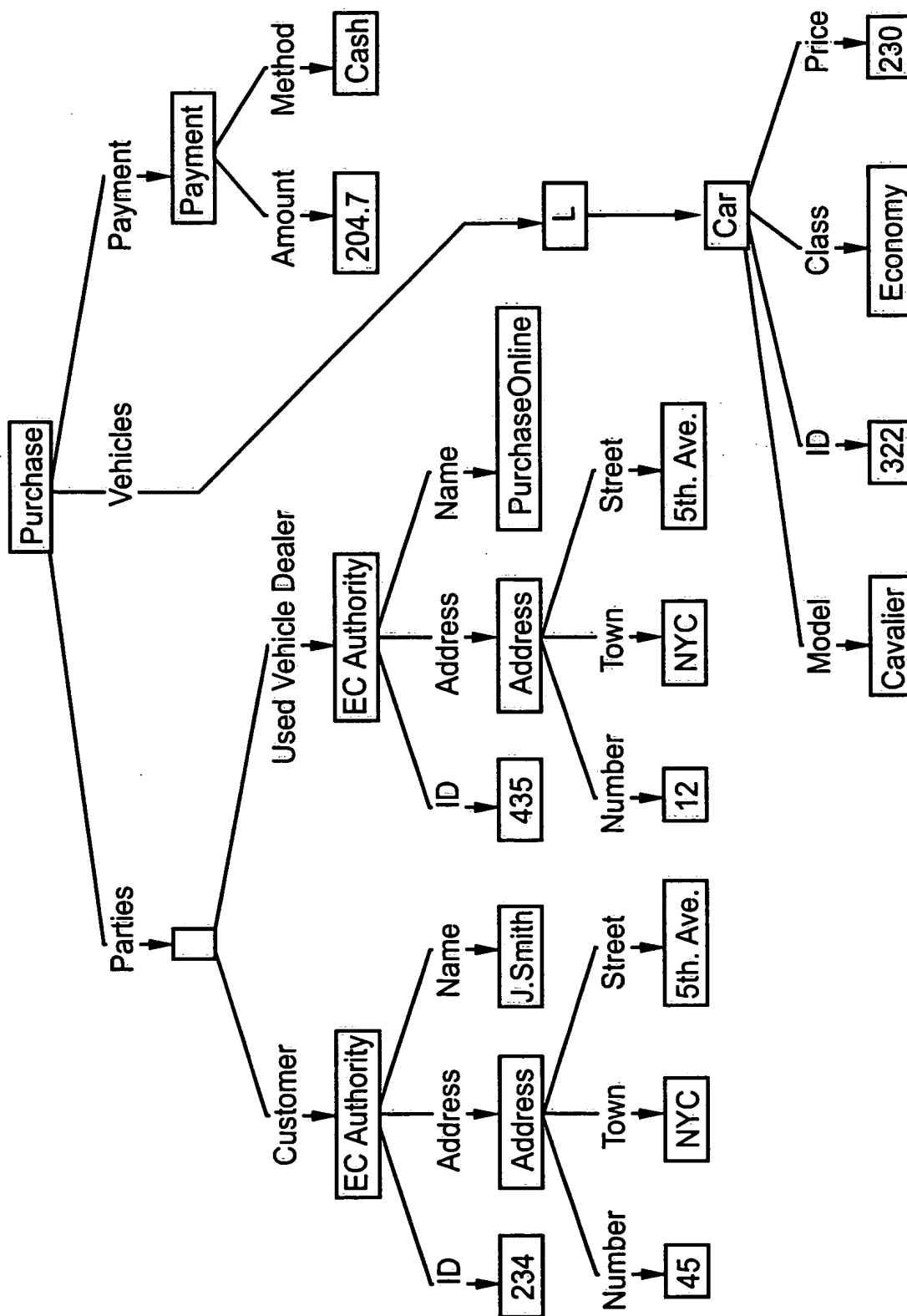


Fig. 9 The generated Econtract

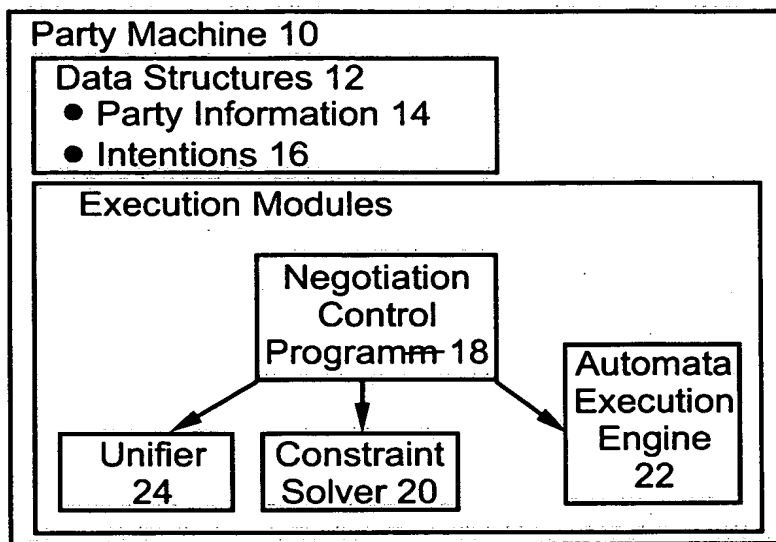


Fig. 10 Party Architecture

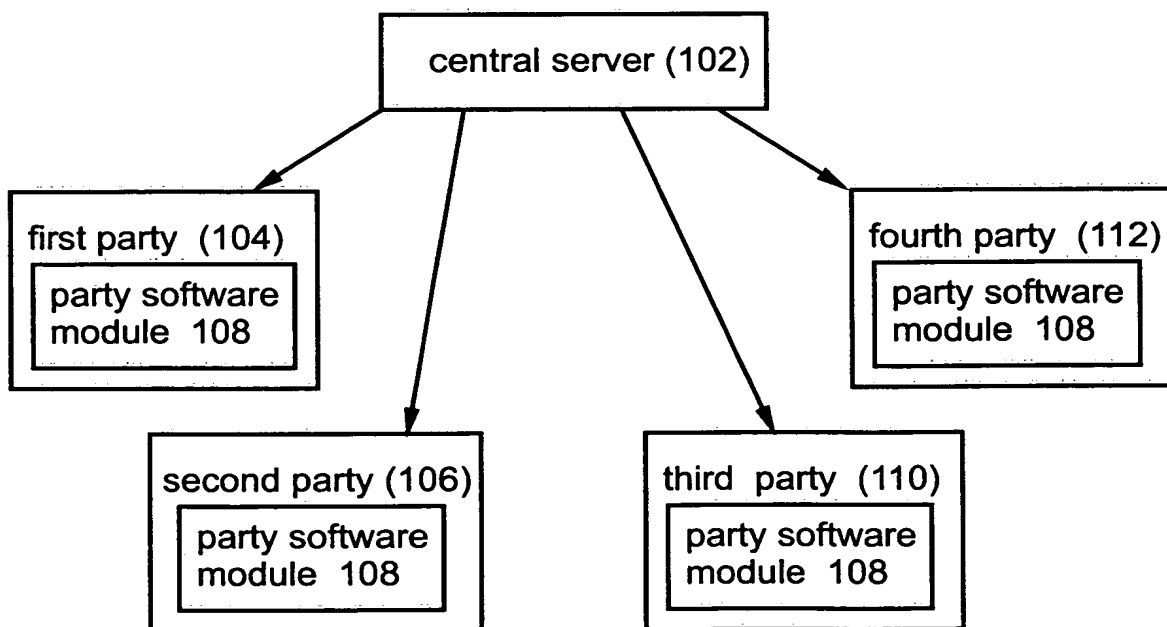


Fig. 11